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AMERICAN DYESTUFF REPORTER

Vol. III, No. 12

Sept. 16, 1918

IN THIS ISSUE

The Chemical Exposition
Great Number of Dyestuff Manufacturers will Exhibit

American Dyestuffs in the Far East
By Paul Nobbe

New Mineral Dyestuffs

Announcement

WE announce the publication of a new and complete catalogue containing various lines of Colors, Chemicals, Gums, Oils, and Tanning Materials that are of immediate interest to the consumer. A copy will be cheerfully mailed anyone interested upon request.

A. KLIPSTEIN & COMPANY
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THE

American Dyestuff Reporter

Extends a cordial invitation
to those who visit the

Chemical Exposition

at the

Grand Central Palace

to call on us at our

BOOTH No. 466

where we shall be glad to be of service in every way possible to all who are connected with or interested in the American Dyestuff Industry.

American Made
IMMEDIATELY AVAILABLE

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The high quality of our products is made possible—

First: because the whole process of manufacture is performed by us. This includes:

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Manufacturing from these products the various intermediates required.

The manufacture of the dyes themselves.

Second: a careful standardization before delivery.

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Third: the policy of "quality first" always, plus the determination to build a permanent 100% American Dyestuff industry.

Our line of colors is now so extensive that we do not publish a list of products but invite your inquiries.

With quality goes service also and our laboratories and chemists are at your service for the submission of your problems or your samples for matching.

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AMERICAN DYESTUFF REPORTER

A Weekly Publication devoted to

DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

Vol. 3 New York, September 16, 1918 No. 12

THE CHEMICAL EXPOSITION

The Event This Year Should Furnish a Special Appeal to Dye Fraternity

THE stage is set. Final arrangements for the "big show"—the Fourth National Exposition of Chemical Industries—are practically completed, and when the doors of the Grand Central Palace swing open at 12 o'clock next Monday, September 23, all will be in readiness to demonstrate the amazing progress wrought by our industrial chemists, makers of equipment and manufacturers during the past year.

For those connected with or interested in the dyestuff industry the exposition will bear a peculiar significance more impelling, perhaps, than to any other single field, for in the four years of achievement, during which we have been steadily wresting away the "secrets" of the German chemists, the dyestuff industry has occupied a unique position.

A novel feature of the exhibits which should greatly enhance their interest for members of the dye fraternity will be the official "bull's-eye" which the management proposes to place on all chemical products (not machinery) which owe their manufacture by American chemists on American soil to the cataclysm which closed the markets of this country to German manufacturers. Since its inception the exposition has sought to accomplish one thing above all others, namely, to call attention to products manufactured for the first time in this country during the war period.

In the past no distinguishing mark was given to such products, with the result that the layman, and likewise even those connected with the industry, could not, in many cases, without special inquiry, determine quickly and easily the actual progress made from year to year. We are sure that the large number of exhibits bearing the "bull's-eye" among the booths of the dye manufacturing companies will be extremely gratifying to those "of the cloth" and to the layman a veritable revelation.

While it is estimated that 25,000 chemists from all parts of the United States, Canada, South America, and from a number of our Allied countries in Europe, will be in New York to attend the exposition and the conventions held in connection with it, it must not be supposed that the event will be of interest to technical men only. Many last year, fearing this, remained away from the exposition until various friends apprised them of the myriad things to be seen which were calculated to catch the fancy of the layman. Indeed, it was the

fundamental aim of the managers to make the exposition an educational affair, and that they succeeded in this was amply attested by the large attendance of school children, students, and even persons engaged in occupations utterly unrelated to anything shown in the booths of the exhibitors.

Although owing to the wide publicity which the report that the Government was about to take over the Grand Central Palace for war work received in the press, the impression became current that the show would not be held this year; it will, however, take place exactly as scheduled, as announced in the REPORTER last week. But it will be the last exhibition of any kind to be held in the structure on Lexington Avenue until after the war. The hours, instead of being from 11 o'clock a. m. to 11 o'clock p. m., as was the case last year, will be from noon until 10.30 o'clock p. m.

More than 350 exhibits, representing every field of industrial chemistry and chemical manufacture, will be displayed and demonstrated. Prominent men in chemical and industrial plants, in colleges and industrial schools, in Government and civilian work have been marshalled for this exposition, which will take on the appearance of a great college and workroom for the interchange of ideas.

In view of the present international situation regarding chemical industries in general and their rapid growth in the United States during the period of the European war in particular, the exposition has a message to deliver emphasizing the opportunity which is now being presented to the American manufacturer: Necessity has spurred on many chemists, and just how far they have succeeded may be judged by the exhibits at the exposition. The American chemist has come to the front and has shattered in four years the "line" of the German chemist which had been building for more than forty years. In other words, the camouflaged "veil of mystery" of the German chemists has been lifted by the American chemists, whose discoveries or "secrets," as the Germans called them, are not locked in the brain of one man, but given to others for the betterment of the industry. At the exposition—this getting together of science and industry with timely addresses and motion pictures—the exchange of ideas will benefit all who attend, and its influence in bettering and increasing the national production will be strongly felt.

While the exposition will bring manufacturers of machinery, equipment, products and supplies together with men who are using them, its chief effect will be to show the people of the country that the chemists of America have made rapid advances the past year, greater than ever before in this country's history. The convention will bring to light some of the marvelous results of recent research, and many engineers and experts who hold important positions in the advance of the chemical industry will be speakers.

The advisory committee of the exposition is composed of Charles H. Herty, chairman; Raymond F. Bacon, L. H. Baekeland, Ellwood Hendrick, Henry B. Faber, Bernard C. Hesse, A. D. Little, W. H. Nichols, R. P. Perry, H. C. Parmelee, G. W. Thompson, F. J. Tone, T. B. Wagner and M. C. Whitaker. Charles F. Roth and F. W. Payne are the managers. Dr. Bacon, of this committee, is now head of the Chemical Warfare Section of the National Army and a member of General Pershing's staff.

Some sections of the South again are sending exhibits, and Canada is taking the opportunity of presenting the materials it has available for development by the chemist and financier. Technical and business men over the country should give heed to these exhibits since they will show how they can meet the war-time need. A section for the glass and ceramic industry has been added

FRED WETZEL & CO. N.Y.

with which the American Ceramic Society is co-operating.

Papers covering practically every phase of chemistry and a discussion of steps that will need to be taken after the war will be presented by leading experts in each branch. Pressing chemical problems concerning many of the chief articles of domestic and foreign commerce will be taken up during the convention, and it is expected these discussions will have an important bearing on the future manufacture of materials that have been scarce and high-priced ever since the curtailment of American commerce with Germany and other European countries.

GENERAL PROGRAM

An elaborate and important program has been arranged for the week, as follows:

MONDAY, Opening Day—Opening addresses to be made during the afternoon by C. H. Herty, chairman of the advisory committee; William H. Nichols, president American Chemical Society; F. J. Tone, president American Electrochemical Society; G. W. Thompson, president American Institute of Chemical Engineers. There will be symposiums on "The Development of Chemical Industries in the United States, Notably Since July, 1914." Evening — Motion pictures. Water Power, Its Development and Use: "The Falls of Iguizu, Argentine"; Great Latent Powers: "Power of Wealth—Hydraulic Development"; "Power Transmission: Canadian Shawinigan Falls Power Development and Its Surrounding Chemical Industries" (Shawinigan Water & Power Company); "Fixation of Atmospheric Nitrogen at Niagara Falls and Feeding the Soil with It" (American Cyanamid Company).

TUESDAY, September 24, Afternoon—Symposium: Acids and Chemical Engineering: E. J. Pranke, *"Development of Nitric Acid Manufacture"*; Emerson P. Poste, *"Developments in the Manufacture of Glass Enamelled Apparatus."* Evening — Motion pictures. The Oil Industries: "The Story of a Cake of Soap"; "Light from the Rocks—Natural Gas"; "Lake Asphalt Industry"; "Asphalt Roofing Industry"; "Asphalt Colloids" (Barber Asphalt Company). Speakers, 9 p. m.—J. A. Switzer, *"Water Power Potentialities of East Tennessee"*; Herbert C. Henegar, *"Mineral Resources of East Tennessee"* (representing Knoxville Chamber of Commerce).

WEDNESDAY, September 25, Afternoon—Symposium: Potash. C. A. Higgins, *"Recovery of Potash from Kelp"*; Linn Bradley, *"Recovery of Potash from Iron Blast Furnaces and Cement Kilns by Electrical Precipitation"*; John W. Hornsey, *"Potash from Desert Lakes and Alunite"*; Alfred de Rapp, Jr., *"Potash from Searles Lake."* Evening—Motion pictures. "Electrical Precipitation of Potash from Cement Dust" (Research Corporation); "Colloid Chemistry"; "The Operation of a By-products Coke Plant"; "Moving a Forest to France"; "The Story of Potash," illustrating the manufacture of potash from the brine of Searles Lake, Cal.; "From Coal Mine to Corn Field, the Production of Sulphate of Ammonia and Its Use in Agriculture" (the Barrett Company).

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THURSDAY, September 26, Afternoon—Ceramics: American Ceramic Society Meeting. L. E. Barringer, *"Manufacture of Electrical Porcelain"* (illustrated motion pictures); A. W. Bleininger, *"Recent Developments in the Ceramic Industries"*; H. Ries, *"American Clays"*; F. A. Whitaker, *"Manufacture of Stoneware"* (illustrated slides); J. B. Shaw, *"Fuel Conservation"*; S. C. Linberger, *"Carborundum Refractories."* These will be followed by motion pictures as designated for the evening program. Evening—Motion pictures—The Ceramic Industries: "Glass Making" (Corning Glass Company); "The Making of Cut Glass"; "Manufacture of Electrical Porcelain" (General Electric Company); "The Making of Pottery." 9 p. m.—Speakers: J. A. Switzer, *"Water Power Potentialities of East Tennessee"*; Herbert C. Henegar, *"Mineral Resources of East Tennessee,"* representing Knoxville Chamber of Commerce.

FRIDAY, September 27, Afternoon—Symposium: Metal Industries: Leonard Waldo, *"Development of Magnesium Industry"*; Alcan Hirsch, *"Ferro-Cerium Pyrophoric Alloys"*; Theodore Swann, *"Ferro-Manganese"*; Joseph W. Richards, *"Ferro Alloys of Silicon, Tungsten, Uranium, Vanadium, Molybdenum and Titanium."* Evening—Motion pictures: Carelessness the Destruction of Life, Wealth and Resources. "Careless America" (Firestone-Universal); "The Crime of Carelessness"; "The Workman's Lesson"; "Keep Your Business Going" (General Fire Extinguisher Company); "Vaccines for Prevention of Disease."

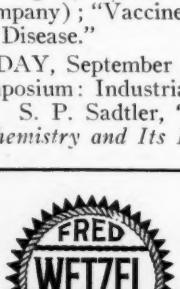
SATURDAY, September 28, Afternoon—Symposium: Industrial Organic Chemistry. S. P. Sadtler, *"Industrial Organic Chemistry and Its Progress"*; C. A. Higgins, *"Kelp as a Source of Organic Solvents"*; George H. Tomlinson, *"Wood Waste as a Source of Ethyl Alcohol."* Evening—Motion pictures. "Manufacture of Zinc Oxide" (New Jersey Zinc Company); "Manufacture of Genuine Wrought Iron Pipe" (A. M. Byers Company); "From Log to Lumber" (Southern Pine Association); "The Wonderland of the Appalachians" (Clinchfield Railway). 9 p. m.—Speakers, J. A. Switzer, *"Water Power Potentialities of East Tennessee"*; Herbert C. Henegar, *"Mineral Resources of East Tennessee"* (representing Knoxville Chamber of Commerce).

To all readers of the AMERICAN DYESTUFF REPORTER we desire to extend a cordial invitation to visit us in Booth 466, located at the extreme rear of the third floor of the exposition (take elevator), close to the entrance to the motion picture and conference hall. We trust that many of our friends will take advantage of this opportunity to become better acquainted and can promise to all visitors a hearty welcome, together with what services or courtesies we may be able to render.

LIST OF DYE MANUFACTURERS WHO WILL EXHIBIT

For the convenience of those particularly interested, we append a list of manufacturers of dyestuffs and closely associated products who will have booths at the exposition. Further information as to the location of these booths, or complete programs of the exposition, can be obtained at the AMERICAN DYESTUFFS REPORTER booth. In next week's issue we will give a detailed account of the various dyestuff exhibits.

American Aniline Products, Inc.,
80 *Fifth Avenue, New York.*
Apex Chemical Co., Inc., The,
Pulitzer Building, New York.
Arnold, Hoffman & Co.,
61 *Broadway, New York.*
Barrett Co., The,
Whitehall Building, New York.
Bound Brook Chemical Co., The,
Bound Brook, N. J.
Butterworth-Judson Corporation, The,
61 *Broadway, New York.*



Campbell, John, & Co.,
75 *Hudson Street, New York.*
Chemical Co. of America, The,
28 *Platt Street, New York.*
Chromos Chemical Co., The,
Aeolian Bldg., 42nd St., New York.
Dow Chemical Co., The,
Midland, Mich.
Drackett & Sons, P. W.,
Cincinnati, Ohio.
Du Pont Dye Works,
Wilmington, Del.
Dye Products & Chemical Co., The,
200 *Fifth Avenue, New York.*
Edison International Corporation, The,
165 *Broadway, New York.*
General Chemical Co., The,
25 *Broad Street, New York.*
Hemingway, Inc., Frank,
115 *Broadway, New York.*
Heald & Co., John H.,
Lynchburg, Va.
Hellenic Chemical & Color Co., Inc., The,
1 *Cedar Street, New York.*
Imperial Color Works,
Glens Falls, N. Y.
Bachmeier & Co.,
438 *West 37th Street, New York.*
R. U. V. Co. ,The,
165 *Broadway, New York.*
Innis, Speiden & Co.,
46 *Cliff Street, New York.*
Wolf & Co., Jacques,
Passaic, N. J.
Kalbfleisch Corporation, The,
31 *Union Square, New York.*
Klipstein & Co., A.,
644 *Greenwich Street, New York.*
Marden, Orth & Hastings Corporation, The,
61 *Broadway, New York.*
Metz & Co., Inc., H. A.,
122 *Hudson Street, New York.*
National Gum & Mica Co.,
11*th Ave. and* 59*th St., New York.*
National Aniline & Chemical Co., Inc.,
21 *Burling Slip (foot of John St.) New York.*
Newport Chemical Works, The,
Passaic, N. J.
Sterling Color Co., The,
72 *Front Street, New York.*
Semet-Solvay Co., The,
Syracuse, N. Y.
Seydel Manufacturing Co., The,
86 *Forrest Street, Jersey City, N. J.*
Stamford Extract Co., The,
82 *Wall Street, New York.*
Stein, Hall & Co., Inc.,
61 *Broadway, New York.*
Takamine Laboratories, Inc., The,
120 *Broadway, New York*
Warner Chemical Co., The,
52 *Vanderbilt Avenue, New York.*
Williamsburg Chemical Co., The,
230 *Morgan Avenue, Brooklyn, N. Y.*

At an aggregate rental of about $50,000, the New York Color & Chemical Company has leased property at 98 John street and 17 Platt street, New York City, for a term of years.

Announcement has been made that the British American Chemical Company, New York, with a plant at Ridgewood, N. J., is now in the hands of receivers. Newman Erb, of New York, and former Governor James F. Fielder, of New Jersey, have been appointed to act for the Government.

Visit our exhibit at the

Fourth National Exposition of Chemical Industries

Frank Hemingway, Inc.
115 Broadway, New York

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Dealers
Exporters
Importers

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Coal Tar Bases & Intermediates
Heavy and Miscellaneous Chemicals
Pharmaceuticals

AMERICAN DYESTUFF REPORTER
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Pointed solely toward the welfare and growth of the American Dyestuff Industry. Unbiased contributions appreciated

A. P. HOWES, Editor and Publisher

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NEW AMERICAN COLOR

There is no better example of the "Made in U. S. A." slogan than the American Color Card. In a few years this card has set a standard which has not merely attracted attention, but has aroused the honest admiration of the trade. Prior to the war the textile industry was wholly dependent upon Europe for its color inspiration. To-day the American textile manufacturer is not only dyeing his fabrics with American dyes, but he is getting his color suggestions from American Color Cards, which have not merely filled the gap during war conditions, but have gone beyond and met the color needs of the fabric market in a scientific and practical way hitherto unequalled.

The card carries, as usual, forty-four colors, thirty-four of which are entirely new and novelty shades; a few standard and past seasonal colors are included, owing to their promise of continued popularity. The blues predominate. Four families of three shades each cover a varied range of hue and are described most aptly by their names. Ether, Azure and Zenith are the most brilliant in tone. The greenish blues are well represented by those named after the Great Lakes—Huron, Michigan and Superior. Three blues quite individual in character are Larkspur, Jay and Kingfisher, and should prove a valued addition to the list. There are, however, three blue greys which, from a point of artistry, immediately catch the eye. These are the blues of the French army, so familiar to us these days, and their names—Poilu, Alpine and Blue Devil—make their individual appeal. To complete the list of blues, those good old standards, Marine and Navy 2, make a practical climax.

Three soft, attractive greys are shown, bearing the names Gull, Crane and Pigeon. These should prove of distinct value to the dress goods trade, as it is expected that all shades of grey will hold a place of prominence in the spring season.

The brown family is not forgotten; in fact, there are three that are very much out of the ordinary; they are Titian, Rust and Henna, very smart colors, rich in the red brown qualities, and should make a strong appeal to the millinery trade. The reliable standard champagne is supplemented by two deeper shades, Doe and Deer. Three shades also of the brown family especially adaptable to the style tendencies are Parchment, Dust and Bark.

The purples shown this season are very good. The orchid family is described under the botanical names Vanda, Cattleya and Gigas. The deep violets are called Veronica, Bishop and Prelate. Two delicate yellows are shown by Buttercup and Dandelion, while Coral pink and Bermuda, of deeper hue, offer excellent examples of the pastel shades so effective for evening wear.

The rose shades are well chosen. Weigelia, the lightest in tone, followed by Carnation and Peony, are rich in coloring and should be looked on with favor by the cotton trade. Cherry and American Beauty, so well known as serviceable colors, complete the reds. There are but three greens, the lightest, Leek, followed by Verdure and Ivy, are all much softer than those offered on the last seasonal card.

A prominent dyestuff manufacturer pointed out recently that the principle of standardizing trade colors not only benefited the fabric manufacturer, but it likewise worked for the benefit of the dyestuff producer and the dyer, for the reason that it brought about a far closer color co-ordination between the three. Once a color is determined by the trade as a certain definite, well-defined shade, it automatically acts as a guide to dyestuff manufacturer and dyer.

(*Continued on page* 12)

DU PONT AMERICAN INDUSTRIES

DU PONT DYESTUFFS

Du Pont American Industries Exhibit

We extend a cordial invitation to our friends in the textile industry to visit the Du Pont American Industries Exhibit at the Fourth Annual Exposition of Chemical Industries, Grand Central Palace, New York, the week of September 23rd. The exhibit, which will occupy Booths 7, 8 and 9 on the first floor, will contain an interesting and instructive display of over 300 products manufactured by the various Du Pont American Industries in the following lines:

EXPLOSIVES
E. I. du Pont de Nemours & Company

PYROXYLIN & COAL TAR CHEMICALS
Du Pont Chemical Works

LEATHER SUBSTITUTES
Du Pont Fabrikoid Company

IVORY PY-RA-LIN AND CHALLENGE COLLARS
The Arlington Works

PAINTS, PIGMENTS, ACIDS AND CHEMICALS
The Harrison Works

COAL TAR DYESTUFFS
Du Pont Dye Works

We will be glad to provide complimentary tickets in limited quantities upon request.

E. I. du Pont de Nemours & Co.

WILMINGTON **DELAWARE**

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DU PONT

It is noteworthy that prominent color chemists who have examined the card are of the opinion that all the shades indicated can be produced satisfactorily from American-made dyestuffs. A warning is issued by the Color Card Association, however, which reads:

"Users of this card will please note that shades on wool and silk which require a blue coloring matter cannot be dyed 'fast' at the date of issuing this card. A blue of good fastness is promised early in November, 1918. In February, 1919, it is expected that the fastest known blue will be on the market.

"Until these products are on the market care should be taken in using shades in which blue is a factor. The blue now on the market (sulphonated indigo) is not fast, and reputable dyestuff houses do not warrant it as fast. It will not stand any considerable exposure to light."

NEW MINERAL DYESTUFFS

M. Malcolmson and F. W. V. Fitzgerald have taken out a patent (Br. Pat. 117,095) for the manufacture of new dyestuffs and for new processes. Certain salts of metals are capable of reacting with other salts of minerals or metals to fix various shades on wool. When certain of these colors do not dye cotton the addition of sulphur enables various shades of color to be produced and fixed on the vegetable fiber.

The inventor, naturally, does not assert that he has discovered that mineral and metallic substances are of use in the production or fixing of colors, but claims to have invented a method of treating certain substances of mineral or metallic origin in a novel manner, whereby the use of these substances for dyeing may be greatly extended and more economical.

Browns and Blacks

To obtain light, medium and deep shades of brown to black on woolen or fabric, at temperatures varying from 60 deg. to 180 deg. Fahr., a lead compound, such as lead oxide, carbonate, nitrate, acetate or sulphate of lead, is used in the proportion of from 2 per cent upwards of the weight of material to be dyed. After stirring this into the dye beck, a small proportion of caustic soda is added, from 1 per cent upwards, calculated upon the weight of the goods to be dyed.

When the caustic soda has dissolved the yarn or fabric is entered. If oxide or carbonate of lead has been used, the color will gradually develop after a few hours in the cold. By heating the dye beck to a temperature from 100 deg. to 180 deg. Fahr. (care being taken not to tender the goods by too high a temperature), the color can be developed in from twenty to thirty minutes.

If too deep a color is obtained, this may be rectified by passing the goods through a dilute sulphuric acid bath or by the addition of sulphuric acid to the dye beck. Nitric acid may be used in the place of sulphuric acid if a brighter yellowish color is desired. The addition of salt to the dye beck retards the development of the color.

Calcium hydrate may be used in the place of the hydrate of soda if desired. Since, however, this is converted into carbonate in the process of dyeing, caustic soda is preferred because the carbonate is soluble, whereas calcium carbonate is insoluble, and further, the

We urge that the Textile Industry support the stand of the American Dyestuff Reporter for an American Dyestuff Industry.

SIZOL
TRADE-MARK

SIZINGS — FINISHINGS — SOFTENERS

SEYDEL MFG. CO.
Jersey City, N. J.

FRED WETZEL & CO. N.Y.

insoluble carbonate becomes entangled or embedded in the fiber. However, the formation of an insoluble carbonate, when calcium hydrate is added direct to the dye beck, can be prevented by the use of a small quantity of sal-ammoniac. This effects the formation of ammonium carbonate, which is volatile, and of soluble calcium chloride in the place of the insoluble carbonate.

The insoluble lead compounds can be mechanically mixed with sodium carbonate and calcium oxide, in various proportions, this mixture yielding a dyestuff capable of giving a good direct brown to woolen when used alone. Three parts of an insoluble lead compound, such as litharge, mixed with four parts of calcium oxide and six parts of sodium carbonate (the whole being thoroughly ground down and mixed together) makes a good mixture. From 1 per cent upwards of this mixture, calculated upon the quantity of wool to be dyed, may be used to give a brown to woolen.

Good results have been obtained by adding various quantities of this mixture to the bath, at from 100 deg. to 120 deg. Fahr., entering the goods to be dyed at 180 deg. to 212 deg. Fahr., dyeing taking from thirty minutes upwards, according to shade.

Manufacturers' Dyestuffs

In manufacturing a dyestuff from these lead compounds, a saturated solution of a soluble lead salt is combined with a soluble salt of iron or copper which contains water of crystallization by first rendering the iron or copper salt anhydrous, and then replacing the water of crystallization by the saturated lead solution. Soluble vegetable or organic coloring matters may be added to this lead solution and dissolved in it prior to its being combined with the anhydrous iron or copper salt. The quantity of iron or copper salt to be used will, of course, be calculated from the known quantity of water of crystallization originally contained in a given quantity of the iron or copper salt. The water of crystallization must be equal to, or greater than, the water contained in the lead solution.

The combination of the lead solution with a copper salt yields a dyestuff capable of imparting a good direct khaki to woolen, when used in conjunction with an alkaline mordant. The combination of an iron salt with the lead solution yields a brown.

When using the combination of a solution of a soluble lead salt with the anhydrous copper sulphate or salt previously described, a mordant is used, composed of a ground down mixture of sodium carbonate and calcium oxide. Six parts of sodium carbonate and four parts of calcium makes a good mixture, but other proportions may be used. Dyestuff and mordant may be used in equal proportions, the combined quantities being regulated according to the depth of shade required.

In dyeing with these substances the required quantity of dyestuff is entered into the dye bath at from 90 deg. to 120 deg. Fahr. When the dyestuff has dissolved the goods are entered and the temperature of the dye liquor raised to 212 deg. Fahr. While the dye liquor

YOU can't afford to use any but the finest
Oil Soluble Colors

We Manufacture the Finest

OIL ORANGE
OIL RED
OIL BROWN
OIL YELLOW
OIL BLUE
OIL MAHOGANY

We Can Match Special Colors

SIZING SPECIALTIES CO.
Incorporated
JERSEY CITY, NEW JERSEY

is coming to the boil the required quantity of mordant is put in with an enameled iron vessel with from twelve times upwards by bulk of cold water, and the liquid is brought to the boil. After the sediment has settled, and when the dye bath has been raised to 212 deg. Fahr., the goods are lifted and the clear mordant liquor is put into the dye water. If necessary, a strainer is used to prevent any of the sediment passing into the dye bath.

It will be obvious that an extensive variety of shades may be produced by mixing the various substances or by successively dyeing the same fabric with two or more of the colors. The production of certain of these shades, however, necessitates the use of an acidified solution of the metallic salt.

Printing Resists

For tissue printing various resists or alterants may be topically applied prior to the dyeing of the fabric in order to produce various effects.

As an instance of the use of sulphur when the color goes on wool but not upon cotton, sulphur is added to the extent of from one-quarter to one-half of the weight of the lead compound used before mixing in the caustic calcium or sodium hydrate. After entering the cotton goods, the dye bath is brought to 212 deg. Fahr., at which temperature the color rapidly takes upon the cotton.

The inventor is of the opinion that, with certain exceptions, these colors result from the formation of wholly or moderately insoluble metallic sulphides within or upon the yarn or fabric to be dyed. In this connection it may be stated that the inventor has found that the use of a metallic sulphate, or the addition of sulphur to the dyestuffs, tends to intensify or deepen the shades produced upon the wool.

It is not only the alkaline reactions or the formations of alkaline or neutral sulphurets that produce certain shades, but certain metals—copper, for instance—have their sulphides precipitated by the evolution within, or the passing of sulphuretted hydrogen through an acidified solution of their salt. Fibers which do not contain sulphur in themselves should be treated in the manner indicated for cotton.

In connection with the use of the dyestuffs herein described, the inventor has electrolyzed the water in the dye bath to precipitate or produce the colors within or upon the yarn or fabric to be dyed instead of raising the temperature. —*Dyer & Calico Printer.*

FRED WETZEL & CO. N.Y.

To carry on the business of dyers, bleachers, mercerizers and finishers of textiles, the Hudson Dyeing Company has been incorporated under the laws of Massachusetts at Hudson, that State, with a capital of $15,000.

AURAMINE

Equal to the best foreign types

Manufactured by

Atlas Color Works, Inc.

322 Ninth St., Brooklyn, N. Y.

Works: Brooklyn, N. Y.

AMERICAN DYESTUFFS IN THEIR RELATIONS WITH THE FAR EAST

By Paul Nobbe

Vice-President and Sales Manager, American Aniline Products, Inc., New York

DYESTUFF making is a *science.* Once the Japanese consumer understands that truth, he will understand why dyestuff business can only be conducted on scientific lines, if it is to prosper. That does not imply that the commercial handling of dyestuff requires a scientist, but it does imply that the proper development of the dyestuff business requires a large amount of technical information on the part of the manufacturer in regard to the exact requirements of his customers.

He should know the material or materials to be dyed, the fastness properties demanded, and the dyeing machinery which the individual dyer has at his disposal.

With such information at hand, he is in a position to make the proper recommendations as to colors of his own manufacture suitable for such work, or if he is not in a position to do so, he can at least indicate to his chemists certain lines of research that are likely to lead to the proper colors. And it is information of this kind that is woefully lacking as between the American manufacturer and the Japanese consumer, whether the latter be a cotton, wool, silk, jute, paper, ink manufacturer, carpet mill, tannery or what not.

The present business in American-made anilines to the Far East at this time is a haphazard affair, pure and simple, and it will not survive the war, unless an effort is put forth to a more perfect understanding of the fundamental facts. *"Knowledge is capital."* And for more reasons than one it would seem as much in the interest of the Japanese consumer to foster the American dyestuff industry as it is to the advantage of the American manufacturer to get a foothold in the Japanese market, for it cannot be doubted that there will be a trenmendous expansion in the American industry after the war.

In making this prediction we are basing our views on past performances (1916-1918), which to say the least, have been marvelous when we realize that to-day there is manufactured in the United States a full range of all the primary colors of the various groups. The ordinary wants can be satisfied without any trouble. On the other hand, there are hundreds of the better and faster grades of colors, formerly made on the Continent, that we cannot now produce, less for the reason that we do not possess the necessary scientific knowledge than because either the raw materials, where they might be obtainable, regardless of their possibilities in the aniline field, are converted into things to win the war or because the prices for the raw materials would be such as to render the colors prohibitive in cost .

Viewing our own accomplishments in the dyestuff field, we can point with pride to a number of very difficult colors of which we were the American pioneers, such as *Amanil Sky Blue,* the first direct sky blue made in America on a commercial scale; *Methyl Violet 6 B Crystals, Methylene Green B,* and last, but not least, the one color which no silk dyer can do without, *Victoria Blue B,* equal in every respect to the German-made products.

To these we can add a long list of colors, direct, basic, acid, chrome and sulphur, of all descriptions; colors which will dye cotton and silk alike, colors which will dye silk and half-silk in a soap and soda bath, so that the silk can either be left white or cross-

dyed in plain or fancy effects, as the case may be; colors which will discharge a pure white with hydrosulphite—cotton, silk or halfsilk; fast colors for *khaki* and *navy* shades on wool for Government use, such as our alizarine yellow, orange, brown and chrome black, or alizarine navy blue and alizarine serge blues, the blues being used on a chrome mordant for cloth of all descriptions; sulphur colors for khaki shades on cotton for army uniforms; chrome colors for cotton printing; blacks and fancy colors for vegetable or chrome tanned leather; colors for paper, whether dyed in the pulp or in the sheet, or used for calendar work; colors for dyeing animal fur; oil and spirit soluble colors for varnishes, woodstains, etc., and, as the greatest achievement yet, the first American-made vat color—our *Amanil Vat Olive*, a color belonging to the group of the celebrated *indanthrene colors* of the *Badische Company*, faster than which no aniline colors exist, and, as such, a color in which every Government is vitally interested for olive drab on cotton uniform cloth.

The one thing to impress upon the Far Eastern buyer is the fact that at this time at least dyestuffs should be bought in bulk, by which we mean packages containing from 100 to 500 pounds net, as the case may be.

Packages such as were formerly the custom, whether 2, 4, 8 or 16 ounce bottles or tins, are out of the question at this time. The policy of conservation which every Government has to practice in these days of strife condemn such packing as *"waste,"* and waste it is, not only in the sense of waste of available raw material, but waste also in the sense that 50 per cent, if not more, of the material put up in small packages is actually wasted or thrown away.

The dyestuff imports into China, as an example, would, in the writer's opinion, be reduced by one-half in value if bulk packing were adopted. And therein lies the reason why the German manufacturer has fostered and encouraged for all these years the idea of small packing. In the first place he sold twice as much in quantity as he would ordinarily, and secondly, he obtained for bottles, tins, wrapping paper and labels a return far beyond the original cost of intrinsic value of such materials; they were paid for as *color*—a profitable business in itself.

To wind up, what it has taken Germany fifty years to accomplish the United States of America is rapidly accomplishing within a space of a few years, and we may safely prophesy that with the immense resources of the North American continent in raw materials, the tremendous plants built for explosives which can readily be converted into color factories when the proper time comes, with the indomitable American spirit pervading every branch of industry, Germany will have to look to her laurels, and in the meantime every foreign consumer of dyestuffs will do well to watch closely the progress of the American manufacturer and to encourage him to the fullest extent.

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BRITISH DISCOVERY WILL AID DYE INDUSTRY

Sir William Crookes, in his publication the *Chemical News*, notes that a new British key industry has been created by the discovery of a process to treat an English mineral earth and convert it into a product invaluable, and, in some cases, indispensable for a number of trades and industries.

British trades and industries that benefit from the new product include the manufacture and treatment of colors, paints, printing inks, soaps, toilet preparations, starch, leather, heat-resisting materials, insulating material and lubricants.

The substance (known commercially as Catalpo) is expected to prove of considerable assistance in the British dye industry.

The discovery of the substance was made after years of research, and the *Daily Express* is able to quote two leading authorities regarding the merits of the product:

Mr. J. Allen Howe, B.Sc., F.G.S., the geologist and curator of the Government Museum of Practical Geology, Germyn Street, states that the product is the result of a new chemical process, that it fills a great requirement, that it should be of national importance, and that its commercial uses should be numerous.

Prof. J. W. Hinchley, A.R.S.M., Wh.Sc., F.I.C., of the Imperial College of Science and Technology, South Kensington, the authority on chemical engineering, was equally emphatic. He stated that the substance could be used as a base for the production of colors or pigments, as a filling material where a neutral and finely divided material is desirable, and for many other purposes.

"Practically new materials have been produced by its means from what were formerly waste products," he continued, adding that its high chemical purity was of great value.

BRITISH DYES AND LEVINSTEIN UNITE

Despite numerous obstacles, including an endless array of details which had to be worked out to the satisfaction of conflicting views, and despite the gloomy predictions voiced at great length in the English trade press, word has been received on this side of the water that the long-hoped-for merger of British Dyes, Ltd., and Levinstein, Ltd., is now virtually completed. While precise information as to the terms of the amalgamation is at present wanting, this action on the part of these two most powerful single factors in the development of the British dye industry represents a large step forward. It is the belief of those in touch with conditions among our Anglo-Saxon cousins that the step will be but the forerunner of others, all looking to the ultimate ostracism of the Hun from the dye markets of that country, for it is the argument of those in favor of wholesale amalgamation that it was by this method that the Germans first gained their commercial domination. There is no question, certainly, but that the amalgamation idea is rapidly gaining favor among the dye manufacturers of the world.

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In hoc signo vincimus

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NOTES OF THE TRADE

Announcement has been made by the Marden, Orth & Hastings Corporation that former Secretary Arthur C. Trask has been elected vice-president of the organization, with headquarters at Chicago. His place will be filled by Walter O. Hastings. The new vice-president has been associated with the corporation for upwards of seventeen years, while Mr. Hastings is one of the three members of the partnership which, in 1906, took over the business founded by James A. Murdock some eighty-one years ago. In this connection it is interesting to note that M. S. Orth, the present president of the firm, is a direct descendant of Mr. Murdock. The corporation further announces to the trade that within the past few weeks it has opened new branches at 1303 Shelby Street, Louisville, Ky., and in the Union Trust Building, Cincinnati, Ohio.
more than $200,000,000 capital.

With a capital of $10,200, the Stuyvesant Chemical Company, Ind., has been incorporated under the laws of New York to manufacture dyestuffs and chemicals. Headquarters of the concern will be located in New York City.

Alterations and extensions to their works will be carried on by the General Manufacturing Company, Snyder and Swanson Streets, Philadelphia, the contract having been awarded to Henry P. Friem, Inc., Norristown, Pa. The concern is engaged in the manufacture of chemicals.

Prompt action enabled the proprietors of the Knight Woolen Mills, Provo, Utah, to save practically all of the weaving, dyeing, finishing and garment making departments when a destructive fire visited the plant recently.

It has been reported that a new dye plant, to employ 100 people, will be erected at Cable, Wis. Further details of the project are wanting to date.

Work is being rushed by the Westmoreland Chemical & Color Company, whose plant at Philadelphia was recently destroyed by a visit of the fire demon, on the reconstruction of the consumed buildings at a cost of $15,000.

To manufacture chemicals, the Mineraline Chemical Company has been incorporated with a capital of $5,000 at San Diego, Cal. The incorporators are M. Time, J. M. O'Neill and A. B. Hansen.

Salicylic acid and kindred specialties will be produced on a capacity basis by the new plant of the American Chemical Products Company, located at Colgate Street and South Park Avenue, Buffalo, N. Y. This plant was but recently completed.

A recent report from the United States Government indicates that there are now 125 factories for the production of dyestuffs in this country. These plants represent a total investment of more than $200,000,000 capital.

Howes Publishing Co.,

470 Fourth Ave., N. Y. City.

.....1918.

Gentlemen:—Kindly enter .... subscription to the AMERICAN DYESTUFF REPORTER for one year from January 1, 1919, for which you may send bill in the sum of $3.00. It is understood that weekly copies from this date till January 1, 1919, will be included without extra charge.

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The application of the dyestuff to textiles is as much an art as the production of the dyestuff.

Dyeing is a chemical, not a mechanical process. An intimate knowledge of the possibilities of every dyestuff is often necessary to meet the particular requirements of the consumer, and the variation of local conditions, due to differences in the quality of water, steam and chemicals, makes the dyehouse problem an individual one.

Because of this individual factor the technique of the application of dyes commands today, as it has done in the past, the best talent among those distributers who cater to the highest class of trade.

The technical department of this Company is manned by chemists who have been picked because of their expert knowledge, practical experience, and demonstrated ability. Well-equipped laboratories are maintained at our different offices, for the service of our customers.

You are invited to submit your problems. Your questions are welcome. Our advice in answer involves no obligation on your part.

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